

REMARKS

Please reconsider this application in view of the above amendments and the following remarks. Applicant thanks the Examiner for carefully considering this application.

I. Disposition of Claims

Claims 1-6 are pending in this application. Claims 1, 2, and 4 are independent. The remaining claims depend, directly or indirectly, from claims 1, 2, and 4.

II. Objections

The title was objected to as being not descriptive. The title has been amended in this reply to be more descriptive of the invention claimed. Accordingly, withdrawal of this objection is respectfully requested.

Figure 6 was objected to for not having the legend --prior art--. The drawing has been corrected accordingly. Withdrawal of this objection is respectfully requested.

III. Rejection(s) under 35 U.S.C § 103

Claims 1, 2, 3, and 5

Claims 1, 2, 3, and 5 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,097,361 issued to Childers et al. (hereinafter "Childers") in view of U.S. Patent No. 5,278,818 issued to Zucker et al. (hereinafter "Zucker") and Japanese Patent No. 58178676 A issued to Kataoka (hereinafter

“Kataoka”). For the reasons set forth below, this rejection is respectfully traversed.

The present invention is generally directed to an optical pickup actuator circuit for solving a problem of coil burn-out that has reduced manufacturing efficiency of optical disk devices. *See* Specification, page 4. In accordance with the invention, as recited in independent claims 1 and 2, two semiconductor devices are connected in parallel between an end of a coil and ground so that any received input voltage “not lower than” a predetermined voltage will be applied to ground rather than to the coil. Hence, an abnormal voltage not lower than the predetermined voltage is never applied across the coil and burn-out is avoided. Accordingly, the invention has the effect of improving production efficiency of optical disk devices. *See* Specification, page 12.

With respect to Childers, the Office Action of April 21, 2004, recognizes that Childers fails to disclose any coil protection features, and certainly does not disclose two diodes or semiconductor devices connected in parallel with a coil as required by independent claims 1 and 2. Further, the Office Action recognizes that Childers fails to disclose an input voltage not lower than a predetermined voltage being led to the ground by the two diodes or semiconductor devices as required by independent claims 1 and 2 of the present application. However, the Examiner suggests that the present invention is unpatentable over Childers in view of Kataoka and Zucker.

Applicant respectfully submits that there is no motivation to combine the teachings of Childers with that of Kataoka. There must be a suggestion or motivation to combine the references within the prior art references themselves. In other words, regardless of whether prior art references can be combined, there must be an indication within the prior art references *expressing desirability* to combine the references. *In re*

Mills, 916 F.2d 680 (Fed. Cir. 1990) (emphasis added). Further, the present application *cannot be used as a guide* in reconstructing elements of prior art references to render the claimed invention obvious. *In re Vaeck*, 947 F.2d 488 (Fed. Cir. 1991) (emphasis added).

Childers is directed to an apparatus which supplies a bias electrical current to coils that generate magnetic fields in opposite rotational senses and force a rotary actuator against a pivot pin in such a manner that the point of contact between the rotary actuator and the pin follows the rotation of the actuator about the pin. *See* Childers, Abstract. On the other hand, Kataoka uses saw tooth voltage for electrostatic deflection together with a comparative waveform of a chopper circuit for controlling the focusing coil, and executing pulse width duty control, in order to stabilize the current supplied to a focusing coil. *See* Kataoka, Abstract. As shown in Figure 3, a supply voltage 12 is applied to a focusing coil 15 through a transistor whose collector is grounded by a damper diode 22, a filter formed by a choke coil 23, and a smoothing capacitor 24. Accordingly, Kataoka discloses a negative feed back system where the damper diode 22 is used to generate a saw tooth voltage.

The Examiner suggests that it would have been obvious to one of ordinary skill in the art at the time of the invention by the Applicant to have connected the diodes in parallel with the focusing coil of Childers as suggested by Kataoka, in order to stabilize the current supplied to the focusing coil. However, there is no suggestion, either explicitly or implicitly, in Childers to have the recited feature of Kataoka, and it is clear to one skilled in the art that Childers and Kataoka are wholly unrelated. Thus, there is no suggestion within either Childers or Kataoka to incorporate, or otherwise combine, the teachings of one another.

Similarly, Applicant notes that there is no motivation to combine the teachings of Childers with that of Zucker. As discussed above, Childers is directed to an apparatus that supplies a bias electrical current to coils that generate magnetic fields in opposite rotational senses and force a rotary actuator against a pivot pin in such a manner that the point of contact between the rotary actuator and the pin follows the rotation of the actuator about the pin. *See* Childers, Abstract. On the other hand, Zucker is directed to a circuitry that uses a series of two oppositely poled diodes paralleling an oscillatory circuit comprising a coil and a capacitor to attain reliable and rapid reversal of the magnetic field. *See* Zucker, column 2, lines 5-11. The Examiner suggests that it would have been obvious to one of ordinary skill in the art at the time of the invention by the Applicant to have used the diode configuration of Zucker in lieu of the diode configuration of Childers because both configurations perform the same function of limiting the amount of current through the coil. However, there is no suggestion, either explicitly or implicitly, in Childers to have the recited feature of Zucker. Thus, there is no suggestion within either Childers or Kataoka to incorporate, or otherwise combine, the teachings of one another. Furthermore, as stated above, the present application *cannot be used as a guide* in reconstructing elements of prior art references to render the claimed invention obvious. *In re Vaeck*, 947 F.2d 488 (Fed. Cir. 1991) (emphasis added).

Thus, as discussed above, Kataoka and Zucker are not properly combinable with Childers. Therefore, independent claims 1 and 2 of the present application are patentable over Kataoka, Zucker, and Childers. Dependent claims are allowable for at least the same reasons. Accordingly, withdrawal of this rejection is respectfully requested.

Claims 4 and 6

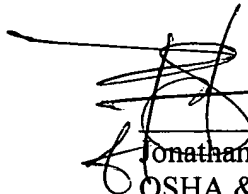
Claims 4 and 6 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Childers in view of Zucker. The Office Action of April 21, 2004, recognizes that Childers fails to disclose diodes configured to lead an input voltage of a predetermined voltage or more to ground as required by independent claim 4. However, the Examiner suggests that it would have been obvious to one of ordinary skill in the art at the time of invention by the Applicant to have used the diode configuration of Zucker in lieu of the diode configuration of Childers. As discussed above, there is no suggestion, either explicitly or implicitly, in Childers to have the recited feature of Zucker and the present application *cannot be used as a guide* in reconstructing elements of prior art references to render the claimed invention obvious. Childers does not recognize the problem addressed by the claimed invention, and thus *ipso facto* cannot disclose or suggest a solution thereto. While Zucker does indeed shows diodes connected to ground, absent recognition of the problem in the prior art, there would have been no motivation for the skilled artisan to have looked to Zucker, or in fact any other reference, for a solution to that problem. As a result, the rejection of claim 4 is untenable as a matter of law. Dependent Claim 6 is allowable for at least the same reasons. Accordingly, withdrawal is respectfully requested.

IV. **Conclusion**

Applicant believes this reply is fully responsive to all outstanding issues and places this application in condition for allowance. If this belief is incorrect, or other issues arise, the Examiner is encouraged to contact the undersigned or his associates at the telephone number listed below. Please apply any charges not covered, or any credits, to Deposit Account 50-0591 (Reference Number 04995/049001).

Respectfully submitted,

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